Complete Summary

GUIDELINE TITLE

Comprehensive adult eye and vision examination.

BIBLIOGRAPHIC SOURCE(S)

American Optometric Association (AOA). Comprehensive adult eye and vision examination. St. Louis (MO): American Optometric Association (AOA); 2005. 37 p. [83 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Optometric Association (AOA). Comprehensive adult eye and vision examination: reference guide for clinicians. St. Louis (MO): American Optometric Association (AOA); 1994. 16 p. (Optometric clinical practice guideline; no. 1).

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Diseases and disorders of the visual system, the eye, and associated structures, including refractive anomalies (myopia, astigmatism, presbyopia), cataracts, glaucoma, diabetic retinopathy, and macular degeneration

GUIDELINE CATEGORY

Diagnosis
Evaluation
Prevention

CLINICAL SPECIALTY

Optometry

INTENDED USERS

Health Plans
Optometrists

GUIDELINE OBJECTIVE(S)

- To develop an appropriate timetable for eye and vision examinations for adult patients
- To select appropriate examination procedures for adult patients
- To effectively examine the eye health and vision status of adult patients
- To minimize or avoid the adverse effects of eye and vision problems in adults through early identification, education, and prevention
- To inform and educate patients and other health care practitioners about the need for and frequency of comprehensive adult eye and vision examinations

TARGET POPULATION

Patients 18 years of age or older

INTERVENTIONS AND PRACTICES CONSIDERED

Comprehensive adult eye and vision examination, which may include but is not limited to, the following procedures:

1. Patient history
2. Visual acuity
3. Preliminary testing to initially define the patient's visual function, ocular health, and related systemic health status
4. Refraction
5. Ocular motility, binocular vision, and accommodation
6. Ocular health assessment and systemic health screening
7. Supplemental testing (e.g., pachymetry, threshold visual field testing)
8. Assessment of data and diagnosis

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline developer performed literature searches using the National Library of Medicine's Medline database and the VisionNet database.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The Reference Guide for Clinicians was reviewed by the American Optometric Association (AOA) Clinical Guidelines Coordinating Committee and approved by the AOA Board of Trustees.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Potential Components of the Comprehensive Adult Eye and Vision Examination

A. Patient History
   1. Nature of presenting problem, including chief complaint
   2. Visual and ocular history
   3. General health history, which may include social history and review of systems
   4. Medication usage (including prescription and nonprescription drugs); mineral herbal, and vitamin supplement usage; documentation of medical allergies; and utiliztion of other complementary and alternative medicines
   5. Family eye and medical histories
   6. Vocational and avocational visual requirements
   7. Identity of patient's other health care providers

B. Visual Acuity
   1. Distance visual acuity testing
   2. Near visual acuity testing
   3. Testing of acuity at identified vocational or avocational working distances

C. Preliminary Testing
   1. General observation of patient
   2. Observation of external ocular and facial areas
   3. Pupil size and pupillary responses
   4. Versions and ductions
   5. Near point of convergence
   6. Cover test
   7. Stereopsis
   8. Color vision

D. Refraction
   1. Measurement of patient's most recent optical correction
   2. Measurement of anterior corneal curvature
   3. Objective measurement of refractive status
   4. Subjective measurement of monocular and binocular refractive status at distance and near or at other specific working distances

E. Ocular Motility, Binocular Vision, and Accommodation
   1. Evaluation of ocular motility
   2. Evaluation of vergence amplitude and facility
   3. Assessment of suppression

4. Evaluation of ocular alignment, including fixation disparity and associated phoria
5. Assessment of accommodative amplitude, response, and facility
6. Assessment of negative relative accommodation and positive relative accommodation

F. Ocular Health Assessment and Systemic Health Screening
   1. Evaluation of the ocular anterior segment and adnexa
   2. Measurement of intraocular pressure
   3. Evaluation of the ocular media
   4. Evaluation of the ocular posterior segment
   5. Visual field screening
   6. Systemic health screening test

G. Supplemental Testing

   There are several reasons for performing additional procedures. Supplement or clarify existing data when indicated to:

   1. Confirm or rule out differential diagnosis
   2. Enable more in-depth assessment
   3. Provide alternative means of evaluating patients who may not be fully cooperative or who may not comprehend testing procedure

H. Assessment and Diagnosis

   At the completion of the examination, the doctor of optometry assesses and evaluates the data to establish a diagnosis (or diagnoses) and formulate a treatment and management plan. In some cases, referral for consultation with or treatment by another doctor of optometry, the patient's primary care physician, or another health care provider may be indicated.

Management of Adults

A. Patient Education

   Communication with the patient at the conclusion of the comprehensive adult eye and vision examination should include review and discussion of examination findings and anticipated outcomes based upon the recommended courses of action. Patient counseling and education may include:

   - Review of the patient's visual and ocular health status in relation to his/her visual symptoms and complaints
   - Discussion of refractive correction that provides improved visual efficiency and appropriate eye protection
   - Explanation of available treatment options, including risks, benefits, and expected outcomes
   - Recommendation of a course of treatment with the reasons for its selection and the prognosis
   - Discussion of the importance of patient compliance with the treatment prescribed

- Recommendation for follow-up care and re-examination

Patients who have undergone surgical or laser procedures for error reduction need to be counseled regarding their ongoing need for periodic comprehensive eye and vision examinations. Procedures to correct refractive error do not reduce the risk of the development of refractive error related complications (e.g., retinal detachment, glaucoma) or other eye problems.

B. Coordination, Frequency, and Extent of Care

The diagnosis of a wide array of eye and vision anomalies, diseases, disorders, and related systemic conditions may result from a comprehensive adult eye and vision examination. As a primary care provider, the doctor of optometry can treat or manage most of these eye and vision problems. Additionally, they may coordinate care of the patient with other health care providers for certain ocular and nonocular problems detected and diagnosed during the examination.

The nature and severity of the problem(s) diagnosed determine the need for optical correction (e.g., spectacles or contact lenses); other treatment (e.g., low vision rehabilitation or vision therapy services); referral for consultation with or treatment by another doctor of optometry, the patient's primary care physician, or other health care provider; and follow-up evaluations. Data interpretation and the professional judgment of the optometrist contribute to decisions regarding appropriate treatment and management, including recommended follow-up examination intervals.

On the basis of the examination, the doctor of optometry may determine that the patient needs additional services. Intraprofessional consultation may be needed for optometric services such as treatment and management of ocular disease, low vision rehabilitation, vision therapy, and specialty contact lenses. Interprofessional consultation with an ophthalmologist may be needed for ophthalmic surgery or other aspects of secondary or tertiary eye care.

The comprehensive adult eye and vision examination may reveal nonophthalmic conditions for which the doctor of optometry may coordinate needed care. The patient may be referred to his or her primary care physician or another health care provider for further evaluation and treatment of systemic conditions or related health problems. Information shared with other health care providers offers a unique and important perspective resulting in improved interdisciplinary care of the patient.

Since the prevalence of ocular diseases and vision disorders tends to increase with patient age, the recommendations for patient re-examination are partially age dependent (see the Table below). The increased and unique visual demands of a technological society bring about the need for regular optometric care during the adult years. Although the prevalence of ocular disease is relatively low for young adults, vocational and avocational visual demands are significant. Thus, for young adults to maintain visual efficiency and productivity, periodic examinations are recommended. For older adults in whom the prevalence of ocular disease is greater, the recommendation is for annual examinations.

Recommended Eye Examinations Frequency for Adult Patients

Patient Age (Years)	Examination Interval	
	Asymptomatic/Risk Free	At Risk
18 to 40	Every two years	Every one to two years or as recommended
41 to 60	Every two years	Every one to two years or as recommended
61 and older	Annually	Annually or as recommended

Patients at risk include those with diabetes, hypertension, or a family history of ocular disease (e.g., glaucoma, macular degeneration) or those clinical findings increase their potential risk; those working in occupations that are highly demanding visually or eye hazardous; those taking prescription or nonprescription drugs with ocular side effects; those wearing contact lenses; and those with other health concerns or conditions.

CLINICAL ALGORITHM(S)

An algorithm is provided in the original guideline document for comprehensive adult eye and vision examination.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Description of appropriate examination procedures for evaluation of the eye health and vision status of adult patients to reduce the risk of vision loss and provide clear, comfortable vision
- Timely diagnosis, intervention, and, when necessary, referral for consultation with or treatment by another health care provider

Subgroups Most Likely to Benefit

The following patients may benefit from more frequent re-examination:

- Those with diabetes, hypertension, or a family history of ocular disease (e.g., glaucoma, macular degeneration)
- Those working in occupations that are highly demanding visually or eye hazardous

- Those taking prescription or nonprescription drugs with ocular side effects
- Those wearing contact lenses
- Those with other health concerns or conditions

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Clinicians should not rely on the Clinical Guideline alone for patient care and management. Please refer to the references and other sources listed in the original guideline for a more detailed analysis and discussion of research and patient care information.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Clinical Algorithm

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1994 (revised 2005)

GUIDELINE DEVELOPER(S)

American Optometric Association - Professional Association

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GUIDELINE COMMITTEE

American Optometric Association Consensus Panel on Comprehensive Adult Eye and Vision Examination

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

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GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the American Optometric Association Web site.

Print copies: Available from the American Optometric Association, 243 N. Lindbergh Blvd, St. Louis, MO 63141-7881.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on October 15, 1999. The information was verified by the guideline developer as of November 15, 1999. This NGC summary was updated by ECRI on January 16, 2006. The updated information was verified by the guideline developer on February 13, 2006.

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Readers with questions regarding guideline content are directed to contact the guideline developer.

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